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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,957	02/19/2002	Yukio Kato	KATO-21	8967

1444 7590 03/23/2004

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EXAMINER

SCHNIZER, RICHARD A

ART UNIT	PAPER NUMBER
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1635

DATE MAILED: 03/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/049,957

Applicant(s)

KATO ET AL.

Examiner

Richard Schnizer, Ph. D

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-16 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group 1 claim(s) 1-6, 8-10, and 16, drawn to the polypeptide of SEQ ID NO:2, a polypeptide with MTf activity encoded by a nucleic acid that hybridizes under stringent conditions to nucleic acid encoding SEQ ID NO:2, and to a fragment of SEQ ID NO:2 lacking the GPI anchor region.

Group 2 claim(s) 1-6, 8-10, and 16, drawn to the polypeptide of SEQ ID NO:4, a polypeptide with MTf activity encoded by a nucleic acid that hybridizes under stringent conditions to nucleic acid encoding SEQ ID NO:4, and to a fragment of SEQ ID NO:4 lacking the GPI anchor region.

Group 3 claim(s) 11-6, 8-10, and 16, drawn to the polypeptide of SEQ ID NO:15, a polypeptide with MTf activity encoded by a nucleic acid that hybridizes under stringent conditions to nucleic acid encoding SEQ ID NO:15, and to a fragment of SEQ ID NO:15 lacking the GPI anchor region.

Group 4 claims 7 and 10, drawn to a nucleic acid encoding the polypeptide of SEQ ID NO:2, encoding a polypeptide with MTf activity encoded by a nucleic acid that hybridizes under stringent conditions to nucleic acid encoding SEQ ID NO:2, or encoding a fragment of SEQ ID NO:2 lacking the GPI anchor region.

Group 5 claims 7 and 10, drawn to a nucleic acid encoding the polypeptide of SEQ ID NO:4, encoding a polypeptide with MTf activity encoded by a nucleic acid that hybridizes under stringent conditions to nucleic acid encoding SEQ ID NO:4, or encoding a fragment of SEQ ID NO:4 lacking the GPI anchor region.

Group 6 claims 7 and 10, drawn to a nucleic acid encoding the polypeptide of SEQ ID NO:15, encoding a polypeptide with MTf activity encoded by a nucleic acid that

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hybridizes under stringent conditions to nucleic acid encoding SEQ ID NO:15, or encoding a fragment of SEQ ID NO:15 lacking the GPI anchor region.

Group 7, claims 11 and 12, drawn to an oligonucleotide, or oligonucleotide analog, that hybridizes to a nucleic acid encoding MTf and suppresses chondrogenic differentiation.

Group 8, claims 11 and 12, drawn to an antibody, that binds to MTf and suppresses chondrogenic differentiation.

Group 9, claims 13-15 drawn to a method of screening for an MTf activating agent.

The inventions listed as Groups 1-9 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The technical feature linking the claimed invention is a membrane bound transferrin-like protein (MTf). However, MTfs, as well as nucleic acids encoding them, were known in the prior art. The specification at page 9 discloses that rabbit and human MTfs were taught by Kawamoto et al. (Eur. J. Biochem. 256: 503-509, 1998) and Rose et al (PNAS 83, 1261-1265, 1986), respectively. Rose also taught the nucleic acid encoding human MTf. Therefore the technical feature linking the different inventions is not a special technical feature under PCT Rule 13.2 because it does not make a contribution over the prior art. Because the inventions are not linked by a special technical feature, restriction between them is proper. The special technical feature of each group is considered to be as set forth in the description of the groups above.

A telephone call was made to Allen Yun on 3/17/04 to request an oral election to the above restriction requirement, but did not result in an election being made.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner(s) should be directed to Richard Schnizer, whose telephone number is 571-

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272-0762. The examiner can normally be reached Monday through Friday between the hours of 6:20 AM and 3:50 PM. The examiner is off on alternate Fridays, but is sometimes in the office anyway.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, John Leguyader, be reached at 571-272-0760. The official central fax number is 703-872-9306. Inquiries of a general nature or relating to the status of the application should be directed to the Patent Analyst Trina Turner whose telephone number is 571-272-0564.

Richard Schnizer, Ph.D.



DAVE T. NGUYEN  
PRIMARY EXAMINER